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484 823 As for the sharp sense of direction of the natives in the forest, or their topographic sense, which has been praised so much, it seems to be the fruit of poetic imagination, if it is generalized for the tribes of the Caiarí. They know very well the rivers and forests that they frequent; however, they do not risk going very far into the forest. They tell of various episodes in which they were lost in the forest. And, in order for this not to happen, they avail themselves of the expedient of breaking branches, all in the same direction, as they draw [171] away from the usual paths. The Mãkú live in the interior of the forests, are hunters, and therefore orient themselves better. It is to be pointed out, however, that they are seminomadic and always travel in groups.

b) Mathematics.

*192 802 The natives have different names for the first five numbers and distinguish the masculine, feminine, and neuter (thing), to wit:

Number	Masculine	Feminine	Neuter
1	nikã, nikõ	nikõ	nikã
2	põãra, põana	põãra, põana	põã, põãro
3	i'tyãra, i'tyãna	i'tyãra, i'tyãna	i'tyã, I'tyãro
4	ba'pári-tĩra	ba'pári-tĩra	ba'pári-tise
(Uaupés)	bapári-tĩna	ba'pári-tĩna	
5	nikã-mũkõra	nikã-mũkõra	nikã-mũkõse
(Uaupés)	nikã-mũkõna	nikã-mũkõna	

It should be noted that Nikã-mũkõra, properly speaking, means one hand. And ordinarily they prefer to indicate the number of fingers (2, 3, etc.) rather than pronounce the numbers. From five on, all of them, practically, are content to show the corresponding number of fingers. The more intelligent ones know how to count up to twenty, using the fingers of the hands and the toes. They no longer know how to count numbers higher than twenty.

*192 • 804 Properly speaking they do not have measures of extension or length. They speak of sẽẽrõ (sẽẽnõ), nikáti sẽẽrõ, the breadth of the arm span or the two open arms, põãti sẽẽrõ, two arm-spans, etc.; a step, yeraró, nikáti yeraró, one step; a handspan, wamũ-ka keoró or wamũ-pama-keoró, nikã pama, one handspan, põã wamũ-ka-keoró, two handspans, ba'páritise wamũ-ka-peosé, four handspans.

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804 As a practical means for their calculations, they will even make a small stick the size of an arm span or a handspan; they are, nevertheless, individual and casual measurements.

797 The arithmetic tables already consitute a serious difficulty for
872 the school children, in spite of being a mere question of memory.
803 Those of better progress do not manage to perform the four operations after /258/ three or four years of attending school. And one notices in all great difficulty in solving the simplest problem in mathematics.

804 It seems that it is equally difficult for them to estimate time,
805 as well as distance and area; thus, they are apt to answer that the length of a room is three kilometers and the course of a river, one hundred meters.

c) Astronomy -- Cosmography.

1) The world.

*192 According to their conceptions, the earth, Di'tã́, is a plain
823 covered by a regular and solid spherical calotte, which is called Õ'mã̃-se (high thing), the sky, with four doors /Port. portas, doors, gates/ corresponding to the four cardinal points, through which the waters of the rivers escape. If these doors were to be closed, the waters would flood the lands and drown all humanity. (Cf. the Legend of the snake Sẽ, p.)

[821] They differentiate the clouds into oxkó-kururí, the nimbi, and o'mẽ-kurúri, cirri.

They call the cardinal points "porta" /door, gate/, Soxpé, and designate them as follows: East, Síro-ká-soxpé (back door); West, Pó'té-ká-soxpé (front door, to wit, of the river); South, Kĩ'pé-ká-soxpé (left door, from which the Uaupés rises); North, Dyakõ-ká-soxpé (right door).

2) Heavenly bodies and stars.

*192 They do not know how to explain how the stars, Yõxkõã́, were
821 formed. All the constellations, however, have a legendary origin. They even assert that the sun, the moon, and the stars are people, Maxsã́, according to their legends. As confirmation, it is to be